

WHAT IS CLAIMED IS:

1. An imaging system including a solid-state CMOS imaging device and a signal processing semiconductor integrated circuit for processing read-out signals of pixels from said solid-state CMOS imaging device, wherein

said signal processing semiconductor integrated circuit is configured to be able to identify a frequency of a light source illuminating an object to be imaged on the basis of the read-out signals of the pixels from said solid-state CMOS imaging device without using a photoelectric conversion element dedicated to detect a light amount of the light source.

2. An imaging system including a solid-state CMOS imaging device and a signal processing semiconductor integrated circuit for processing read-out signals of pixels from said solid-state CMOS imaging device, comprising:

first level detection means for detecting brightness on a first area set up on an imaging area of said solid-state CMOS imaging device;

second level detection means for detecting brightness on a second area larger than said first area; and

judgment means for judging turning-on-and-off of a light source illuminating an object to be imaged on the basis of detection levels of said first and second level detection means.

3. An imaging system according to Claim 2, wherein said judgment means judges that said light source illuminating the object is turned on and off when variation in the detection level of said first level detection means is large and variation in the detection level of said second level detection means is small.

4. An imaging system according to Claim 2, wherein said first area is constituted by pixels on a single horizontal scanning line and said second area is constituted by pixels on a plurality of horizontal scanning lines.

5. An imaging system according to Claim 2, comprising charge storage control means for setting up an electric charge storage time for each pixel of said solid-state CMOS imaging device to be equal to a turning-on-and-off period of said light source illuminating the object or an integral multiple thereof to thereby remove flicker.

6. An imaging system according to Claim 2, comprising a control unit for setting up an electric charge storage time for each pixel of said solid-state CMOS imaging device by means of processing in accordance with a program and wherein said judgment of the turning-on-and-off of said light source illuminating the object on the basis of the detection levels of said first and second level detection means is performed by processing in accordance with a program

in said control unit.

7. An imaging system using a solid-state CMOS imaging device, comprising charge storage control means for setting up an electric charge storage time for each pixel to be equal to a turning-on-and-off period of a light source illuminating an object to be imaged or an integral multiple thereof.

8. An imaging system according to Claim 7, wherein said charge storage control means sets up said electric charge storage time while using, as a unit, time required to scan a single horizontal scanning line.

9. An imaging system according to Claim 7, wherein said charge storage control means changes over said charge storage time in response to said turning-on-and-off period of said light source illuminating the object or an integral multiple thereof to set up an electric charge storage amount for each pixel variably stepwise and interpolates difference in stored light amounts between steps by means of continuous gain control of read-out signals of pixels.

10. An imaging system according to Claim 9, wherein said gain control is performed within said solid-state CMOS imaging device.

11. An imaging system according to Claim 9, wherein said gain control is performed to the read-out signals of pixels taken out outside of said solid-state CMOS imaging device.